## Message

From: Lindstrom, Andrew [/O=EXCHANGELABS/OU=EXCHANGE ADMINISTRATIVE GROUP

(FYDIBOHF23SPDLT)/CN=RECIPIENTS/CN=04BF7CF26AA44CE29763FBC1C1B2338E-LINDSTROM, ANDREW]

**Sent**: 7/5/2016 3:09:08 PM

To: Gaines, Linda [/o=ExchangeLabs/ou=Exchange Administrative Group

(FYDIBOHF23SPDLT)/cn=Recipients/cn=4997ab5b3fb248e2b3dab289acd408b1-Gaines, Linda]

Subject: RE: DuPont WV PFAS question

Linda,

Thank you very much for following up on all of this.

The PFAS are never going to degrade so I think it is important to identify the locations where they have been disposed of and confirm that there are no measureable impacts.

It looks like a significant fraction of this waste was land applied. This will make it a long term source in the local environment that will affect surface and ground water, wildlife, agricultural commodities, and the local population.

I don't know much about landfills, but I suspect that most of these are going to be emitting material into the environment for a very long time.

Are we are acknowledging or addressing this issue in a protective manner?

Thank you,

Andy

From: Gaines, Linda

Sent: Tuesday, July 05, 2016 10:28 AM

To: Lindstrom, Andrew <Lindstrom.Andrew@epa.gov>

Subject: FW: DuPont WV PFAS question

Andy,

Below is an email train of what has been relayed to me about the DuPont disposal areas related to PFOA. I also looked through my database of sites, and Waynesboro Nurseries, Clermont Environmental Reclamation, and BFI East Palestine are all in there as No Further Remedial Action Planned (NFRAP). I am curious if they are in the database as a result of the DuPont investigation or something completely unrelated. GROWS is also in there as being deferred to RCRA. I am not sure how much this helps, but this what we know currently.

As I said, we are supposed to start get an inventory from the regions of PFAS sites. We will see if other possible sites related to this start popping up.

Linda

Linda G.T. Gaines, Ph.D., P.E. Environmental Health Scientist U.S. Environmental Protection Agency OLEM/OSRTI/ARD/Science Policy Branch Gaines.Linda@epa.gov

Phone: (703) 603-7189

From: Freed, Elisabeth

**Sent:** Friday, June 24, 2016 5:46 PM **To:** Gaines, Linda < Gaines. Linda@epa.gov>

Cc: Scozzafava, MichaelE <Scozzafava.MichaelE@epa.gov>

Subject: Fw: DuPont WV PFAS question

Hi Linda,

Hope this helps. Let me know if you need anything else.

Peace, Elisabeth

Elisabeth Freed • USEPA/OECA/OSRE/PGB • (202) 564-5117 • freed.elisabeth@epa.gov •

From: Clark, Jacqueline

Sent: Thursday, June 23, 2016 4:20 PM

To: Reinhart, Roger < Reinhart.Roger@epa.gov >; Johnson, KarenD < Johnson.KarenD@epa.gov >; Davies, Lynne

<<u>Davies.Lynne@epa.gov</u>>; Duchovnay, Andrew <<u>Duchovnay.Andrew@epa.gov</u>>

Cc: Shoven, Heather <shoven.heather@epa.gov>

Subject: RE: DuPont WV PFAS question

Thanks Roger. I just want to clarify that the 2009 order itself did not require DuPont to identify disposal areas. That request was in a 2009 information request issued by EPA to DuPont. -Jacquie

Jacqueline Clark

Associate Regional Counsel U.S. EPA, Region 5 (C-14J) 77 W. Jackson Blvd. Chicago, IL 60604 Direct: (312) 353-4191

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From: Reinhart, Roger

**Sent:** Thursday, June 23, 2016 2:13 PM

To: Johnson, KarenD < <u>Johnson.KarenD@epa.gov</u>>; Davies, Lynne < <u>Davies.Lynne@epa.gov</u>>; Clark, Jacqueline

<<u>clark.jacqueline@epa.gov</u>>; Duchovnay, Andrew <<u>Duchovnay.Andrew@epa.gov</u>>

Cc: Shoven, Heather <shoven.heather@epa.gov>

Subject: RE: DuPont WV PFAS question

In response to a 2009 EPA information request, DuPont informed us about several possible landfill sites in Regions 3 and 5 which may have received C-8 sludge from Washington Works, WV. In addition to the three landfills in West Virginia

which were addressed under various EPA and WVDEP enforcement actions, there were two additional sites in Region 3 where C-8 wastes may have been disposed.

Waynesboro Nurseries (south of Waynesboro, Virginia) received various wastes from DuPont facilities, including Washington Works. There are conflicting reports about whether or not C-8 wastes were taken to the site. The closest public water well is over three miles from the landfill. Residential neighborhoods in the vicinity of the landfill appear to be on public water. There may be a few remote homes, however, which rely on private water wells.

The second site is the GROWS landfill located just south of Bristol, Pennsylvania. The landfill is situated on the banks of the Delaware River and had received wastes from the DuPont Deepwater, NJ facility (not sure about Washington Works). According to Pennsylvania DEP, the non-hazardous landfill is asphalt lined and the ground water flows toward the river. There are no private water wells in the vicinity of the landfill. It should be noted that the UCMR3 results indicate that one of the Bristol public water wells has low levels of PFOA (0.02 ppb to 0.026 ppb). Please let me know if you need more information concerning either of these sites.

From: Johnson, KarenD

Sent: Thursday, June 23, 2016 6:58 AM

**To:** Davies, Lynne < <u>Davies.Lynne@epa.gov</u>>; Clark, Jacqueline < <u>clark.jacqueline@epa.gov</u>>; Duchovnay, Andrew < <u>Duchovnay.Andrew@epa.gov</u>>

Cc: Reinhart, Roger < Reinhart.Roger@epa.gov>; Shoven, Heather < shoven.heather@epa.gov>

Subject: RE: DuPont WV PFAS question

The 2009 Order required them to identify additional waste disposal locations. Roger will have more info but I basically remember they interviewed previous employees, etc. but info was sketchy. They did identify a location in VA I remember and did sampling around it but found nothing. I can't remember how many locations they identified through the process. I'm off to an all-day manager's meeting so hoping Roger can fill in more specifics, when he arrives.

From: Davies, Lynne

**Sent:** Wednesday, June 22, 2016 4:53 PM

To: Clark, Jacqueline <<u>clark.jacqueline@epa.gov</u>>; Duchovnay, Andrew <<u>Duchovnay.Andrew@epa.gov</u>>

 $\textbf{Cc: Johnson, KarenD} < \underline{\textbf{Johnson.KarenD@epa.gov}}; \ \textbf{Reinhart, Roger} < \underline{\textbf{Reinhart.Roger@epa.gov}}; \ \textbf{Shoven, Heather}$ 

<shoven.heather@epa.gov>

Subject: RE: DuPont WV PFAS question

Thanks, Jacquie – Roger and Karen, if there was no further information submitted or discussed by DuPont, I'll just let Elisabeth know that.

Best, Lynne

From: Clark, Jacqueline

Sent: Wednesday, June 22, 2016 4:49 PM

To: Davies, Lynne < Davies. Lynne@epa.gov>; Duchovnay, Andrew < Duchovnay. Andrew@epa.gov>

Cc: Johnson, KarenD < Johnson. KarenD@epa.gov >; Reinhart, Roger < Reinhart. Roger@epa.gov >; Shoven, Heather

<shoven.heather@epa.gov>

Subject: RE: DuPont WV PFAS question

Hi – the letter that was attached to your email to us is the response from DuPont to Regions 3 and 5. I will see if I have more information than is included in the information request response, but I believe the response is the extent of the information we have. The team discussed this with DuPont back in 2009, but no enforcement was pursued. I'm cc'ing Karen and Roger because they may have additional information as well. Thanks-Jacquie

Jacqueline Clark

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From: Davies, Lynne

Sent: Wednesday, June 22, 2016 12:55 PM

To: Clark, Jacqueline <clark.jacqueline@epa.gov>; Duchovnay, Andrew <<u>Duchovnay.Andrew@epa.gov</u>>

Subject: FW: DuPont WV PFAS question

Hi guys – Please see the email from Elisabeth Freed (OSRE) and Linda Gaines below re: a question about disposal of PFOA-contaminated waste. Any recollection as to whether you all discussed waste disposal in previous discussions with DuPont and Mike?

Thanks! Lynne

From: Freed, Elisabeth

Sent: Wednesday, June 22, 2016 1:20 PMTo: Davies, Lynne < <u>Davies.Lynne@epa.gov</u>>Cc: Neves, Peter < <u>Neves.Peter@epa.gov</u>>Subject: Fw: DuPont WV PFAS question

Hi Lynne,

Do you have any information related to Linda's question regarding off-site disposal of PFOA? What did you negotiate in the SDWA 1431 order regarding any waste? Thanks so much.

Peace, Elisabeth

Elisabeth Freed • USEPA/OECA/OSRE/PGB • (202) 564-5117 • freed.elisabeth@epa.gov •

From: Gaines, Linda

Sent: Wednesday, June 22, 2016 1:04 PM

**To:** Freed, Elisabeth **Cc:** Scozzafava, MichaelE

Subject: DuPont WV PFAS question

Elisabeth,

I have a question that I am hoping you could at least point me in the right direction for. I have been communicating with Andy Lindstrom in ORD. He has done a lot of work in the past on PFAS. He asked me a question, and I have no idea the answer, but this seems like something we, especially Superfund, and not just ORD should be looking at. I am attaching a letter he sent me, and below is part of what he asked.

"I have another related request. We've been following up on some PFOA related research concerning DuPont's Washington Works plant in Parkersburg, WV and we're interested in the apparently large amount of waste from that facility that was reportedly shipped off site for disposal.

If you examine the letter attached above (Region 3 October 2009.pdf), DuPont provides USEPA Region 3 details about wastes from their facility that were landfilled/land applied in a number of locations across the southeastern US. There are at least 11 disposal areas on record - six in Ohio, three in West Virginia, and one each in Virginia and Alabama. The sites in West Virginia are well known — the Dry run, Letart, and Local landfills. I am aware of limited data concerning impacts from these three sites, mostly related to groundwater contamination.

But I can't find any data relating to the other eight sites. The attached document indicates that at one disposal site in East Palestine, Ohio a waste management company apparently buried and/or land applied 28,000 tons of PFAS and other wastes in the 1970s. The other out of state disposal sites seem to be similar in nature."

I know he is interested from a research prospective, and probably other reasons. I know when I was on a PFAS enforcement call, Region 5 stated they were negotiating with DuPont about Parkersburg. To be clear, I don't want to step into anything enforcement related. However, are we following up on the landfills and any land application? It looks like some of the waste went to an incinerator. I have been trying to gather information, with little success, as to the engineering requirements to incinerate PFAS completely. Do we know if the PFOA was completely combusted? Do you know the status of any of this? If this is being handled under RCRA Corrective Action, or some other mechanism, all the better. I would love to be able to relay that to Andy if so.

Thanks, Linda

Linda G.T. Gaines, Ph.D., P.E. Environmental Health Scientist U.S. Environmental Protection Agency OLEM/OSRTI/ARD/Science Policy Branch Gaines.Linda@epa.gov

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